

INFORMATION SHEET

ORDER NO. R5-2009-_____
STANISLAUS COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES
GEER ROAD CLASS III LANDFILL
POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION
STANISLAUS COUNTY

The Stanislaus County Department of Environmental Resources (hereafter referred to as Discharger) owns and formerly operated a municipal solid waste landfill that was closed in 1995. The landfill is eight miles east of Modesto. The 168-acre facility was operated as a sanitary landfill by the County of Stanislaus from 1970 until 1990 and accepted residential, commercial, industrial (including cannery waste), and construction and demolition wastes. The landfill was closed in 1995 with a geomembrane and vegetative soil on the top deck and compacted clay and vegetative soil on the side slopes. Closure was approved during July 1996. The landfill contains approximately 4.5 million tons of waste.

Groundwater degradation was identified in 1985, and later confirmed in both 1986 groundwater studies and 1987 Solid Waste Assessment Test (SWAT) water quality studies. Aromatic and halogenated volatile organic constituents (VOCs) are present in groundwater in the "shallow" or "upper" groundwater zone under the landfill and downgradient of the site. The exact lateral and vertical extent of degradation is not determined. Halogenated VOCs have been continuously detected in groundwater since 1987.

A LFG control system consisting of an air injection curtain was installed in 1983 along a portion of the site's southern perimeter. Phase 1 of the LFG extraction system, which included the first flare station, was in operation from 1992 to 2006 and covered the northeast one-third of the site. The system was expanded to include 45 gas wells with aboveground piping and a second flare station located near the center of the landfill. The current LFG control system is comprised of 83 extraction wells and one flare station.

During 1991 and 1993, 12 groundwater extraction wells were installed as part of a groundwater remediation system to address groundwater impacts from VOCs and metals. The groundwater remediation system consists of 12 extraction wells, a granular activated carbon (GAC) treatment system, and eight injection trenches. Groundwater is pumped from the 12 extraction wells located along the perimeter of the landfill and is pumped through a bag filter to remove suspended solids and then through two 10,000-pound GAC units, in series, to remove VOCs. Treated groundwater, prior to injection to the shallow zone via infiltration trenches, is sampled and analyzed to assess effluent quality from the treatment system and to evaluate the system efficiency.

The Discharger upgraded the groundwater extraction system during 2007 to increase the flow rate, including replacing extraction well pumps, air lines, discharge lines, installing more filters, and replacing the GAC. During 2008, the Discharger conducted an aquifer test to estimate the radius of influence for each of the groundwater extraction wells. The results of the aquifer test indicate that the extraction system did not influence any of the monitoring

wells at the landfill. Monitoring wells located closest to the extraction wells were 40 to 60 feet away. The Discharger concluded that the radius of influence of the extraction system was less than the distance to these wells. Based on the results of the aquifer test, the Discharger proposed to prepare a new Engineering Feasibility Study (EFS) to compare ongoing use of the groundwater extraction system (including upgrading the system to achieve higher flow rates) to other available technologies for low-level VOC removal from groundwater.

On 14 April 2008, the Discharger submitted a corrective action work plan for expansion of the existing LFG system into the south area of the landfill. The work plan includes installation of 10 LFG extraction wells, connection of the new LFG wells to the existing flare, and installation of two groundwater monitoring wells near the Tuolumne River. The two groundwater monitoring wells (MW-15D and MW-23D) were installed and a report was submitted on 15 January 2009.

The Discharger submitted an EFS on 13 February 2009 for corrective action of VOCs within the landfill boundary of the south area of the landfill. The Discharger's recommendations include installation of 10 LFG extraction wells. This Order requires that the Discharger install, operate, and maintain the 10 new LFG extraction wells. In addition, the Discharger recommended one of two options: (1) replacement of an existing flare with a 1,500 scfm capacity flare, installation of an additional 28 LFG extraction wells or (2) enhancement of the existing groundwater extraction and treatment system with 20 dual-completion groundwater extraction wells, upgraded treatment units, and increased treatment capacity. This Order requires the Discharger to install 10 LFG extraction wells, and to install either (1) a 1,500 scfm capacity flare and the additional 28 LFG extraction wells or (2) to install 20 dual-completion groundwater extraction wells, upgraded groundwater treatment units, and increased treatment capacity and to implement corrective action for VOC-impacted groundwater at the south area of the landfill, including remediation of groundwater outside the landfill property boundary. This Order requires that the Discharger submit a Construction Report documenting that the corrective action facilities have been installed.

Storm runoff from the site is routed to the sedimentation basin. The basin allows suspended material to settle out from surface water runoff prior to discharge into the Tuolumne River. Discharge from the basin only occurs in very wet weather years. As of January 2009, there have been no discharges from the basin since 31 December 2001.

WLB